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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,355	10/29/2001	Shinobu Togasaki	10002673-1	2701

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EXAMINER

ANYA, CHARLES E

ART UNIT	PAPER NUMBER
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2194

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/020,355	Applicant(s) TOGASAKI, SHINOBU	
	Examiner Charles E. Anya	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/16/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-33 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-8,10-18 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5864,679 to Kanai et al.**

4. As to claim 1, Kanai teaches a method for routing a transaction to a front-end server (figure 3 Col. 10 Ln. 40 - 67, figure 4 Col. 13 Ln. 61 - 67, figure 5 Col. 14 Ln. 40 - 52), comprising: identifying at least one attribute-based category for said transaction (figure 9/10 Col. 15 Ln. 26 – 67, "...feature parameters..." Col. 19 Ln. 13 – 38), identifying at least one of a plurality of front-end servers to process said transaction based at least in part on said identified attribute- based category of said transaction and at least in part on said front-end servers being assigned to execute transactions corresponding to said attribute-based category (Col. 15 Ln. 56 – 62, figure 11 Col. 19 Ln. 13 – 38) and routing said transaction to one of said at least one identified front- end servers (Col. 15 Ln. 61 - 62).

5. As to claim 2, Kanai teaches a method as in claim 1, further comprising assigning said at least one attribute-based category to said transaction (Col. 15 Ln. 26 - 32).

6. As to 3, Kanai teaches a method as in claim 2, wherein assigning said at least one attribute-based category to said transaction comprises associating a tag with said transaction ("...TR-1..." Col. 15 Ln. 32 - 39).

7. As to claim 4, Kanai a method as in claim 1, wherein identifying said at least one front-end server comprises comparing said attribute-based category for said transaction to assigned attribute-based categories for said plurality of front-end servers (Col. 15 Ln. 56 - 62).

8. As to claim 5, Kanai teaches a method as in claim 1, further comprising determining whether said at least one front-end server is available for processing said transaction (Col. 15 Ln. 65 - 67, Col. 17 Ln. 42 - 50).

9. As to claim 6, Kanai teaches a method as in claim 1, further comprising rerouting said transaction to another of said plurality of front-end servers when said identified server refuses said transaction (Col. 13 Ln. 61 - 67, Col. 14 Ln. 1 - 7).

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10. As to claim 7, Kanai teaches a method as in claim 1, further comprising determining when said identified attribute-based category is new and assigning said new attribute-based category to at least one of said plurality of front-end servers (Col. 14 Ln. 56 – 67, Col. 15 Ln. 1 - 25).

11. As to claim 8, Kanai teaches a method as in claim 7, further comprising notifying a workload manager of said at least one front-end server assigned to said new attribute-based category ("...transaction routing unit..." Col. 15 Ln. 17 – 32, Col. 25 Ln. 27 – 32).

12. As to claim 10, Kanai teaches an apparatus for routing a transaction to a front-end server (figure 3 Col. 10 Ln. 40 - 67, figure 4 Col. 13 Ln. 61 - 67, figure 5 Col. 14 Ln. 40 - 52), comprising: computer readable storage media; computer readable program code stored on said computer readable storage media, comprising: program code for identifying at least one attribute-based category for said transaction (figure 9/10 Col. 15 Ln. 26 – 67, "...feature parameters..." Col. 19 Ln. 13 – 38), program code for identifying at least one of a plurality of front-end servers to process said transaction based at least in part on said identified attribute- based category of said transaction and at least in part on said front-end servers being assigned to execute transactions corresponding to said attribute-based category (Col. 15 Ln. 56 – 62, figure 11 Col. 19 Ln. 13 – 38) and program code for routing said transaction to one of said at least one identified front-end server (Col. 15 Ln. 56 - 62).

13. As to claim 11, see the rejection of claim 2 above.
14. As to claim 12, Kanai teaches an apparatus as in claim 10, wherein said attribute-based category is based on at least one "real" attribute of said transaction (figure 9/10 (Database) Col. 15 Ln. 26 – 62).
15. As to claim 13, Kanai teaches an apparatus as in claim 10, wherein said attribute-based category is based on at least one "perceived" attribute of said transaction (figure 9/10 (Withdraw) Col. 15 Ln. 26 – 62, figure 33 Col. 25 Ln. 1 – 9).
16. As to claim 14, Kanai teaches an apparatus as in claim 10, further comprising a user table for assigning said at least one attribute-based category to said transaction (Col. 15 Ln. 45 - 62).
17. As to claim 15, see the rejection of claims 5 and 6 above.
18. As to claim 16, Kanai teaches an apparatus as in claim 10, further comprising program code for assigning a number of attribute-based categories to each of said plurality of front-end servers, wherein said program code for routing said transaction to one of said identified front-end servers routes said transaction according to said assigned attribute-based categories (Col. 15 Ln. 56 - 62).

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19. As to claim 17, Kanai teaches an apparatus as in claim 16, wherein said program code for assigning at least one attribute-based category to each of said plurality of servers bases the assignment at least in part on an affinity of transaction attributes (figure 23 Col. 18 Ln. 51 - 67, Col. 19 Ln. 12 - 37).

20. As to claim 18, Kanai teaches an apparatus as in claim 16, further comprising a workload manager table for recording said assigned attribute-based categories (Col. 15 Ln. 1 - 15).

21. As to claim 20, see the rejection of claim 7 above.

22. As to claim 21, see the rejection of claim 1 above.

23. As to claim 22, Kanai teaches An apparatus as in claim 21, further comprising: means for identifying each of said plurality of servers; and means for assigning at least one attribute-based category to each of said plurality of servers (Col. 15 Ln. 56 - 62).

24. As to claim 23, Kanai teaches a method as in claim 1, wherein identifying said at least one attribute-based category for said transaction comprises identifying a "perceived" attribute of said transaction (figure 33 Col. 25 Ln. 1 - 9).

25. As to claim 24, Kanai teaches a method as in claim 23, wherein the identified "perceived" attribute is the computer originating the transaction (figure 33 Col. 25 Ln. 1 – 9).

26. As to claim 25, Kanai teaches a method as in claim 23, wherein the identified "perceived" attribute is the user originating the transaction (figure 33 Col. 25 Ln. 1 – 9).

27. As to claim 26, Kanai teaches a method as in claim 23, wherein the identified "perceived" attribute is a class of users from which the transaction originates (figure 33 Col. 25 Ln. 1 – 9). xxxx

28. As to claim 27, Kanai teaches a method as in claim 1, wherein said identifying and routing actions are performed by a workload manager, the method further comprising: determining, at an identified front-end server, whether the attribute-based category associated with said received transaction is assigned to the identified front-end server (figure 19A Col. 17 Ln. 37 – 50), and if it is not, establishing an association between i) the attribute-based category of the received transaction and ii) the identified front-end server (figure 23 Col. 18 Ln. 51 – 67).

29. As to claim 28, Kanai teaches a method as in claim 27, further comprising: if the identified front-end server establishes an association between itself and an attribute-based category, broadcasting this association to a plurality of workload managers that

can route transactions to the identified front-end server ("...registered..." Col. 25 Ln. 39 – 49).

30. As to claim 29, Kanai teaches a method as in claim 28, further comprising: upon a workload manager's receipt of said broadcast association, the workload manager updating its own table of assignments between attribute-based categories and front-end servers (Col. 25 Ln. 39 – 46).

31. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5864,679 to Kanai et al. in view of U.S. Pat. No. 6,681,244 B1 to Cross et al.

32. As to claim 9, Kanai is silent with reference to a method as in claim 1, further comprising: determining a status of an attribute-based category; and deallocating said attribute-based category from said front-end server to which it is assigned when said status is inactive.

33. Cross teaches a method as in claim 1, further comprising: determining a status of an attribute-based category; and deallocating said attribute-based category from said front-end server to which it is assigned when said status is inactive (Col. 6 Ln. 15 - 27).

34. It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cross and Kanai because the teaching of Cross would improve the system of Kanai by regulating client routing Col. 6 Ln. 15 - 27).

35. As to claim 19, see the rejection of claim 9 above.

36. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5864,679 to Kanai et al. in view of U.S. Pub. No. 2002/0161917 A1 to Shapiro et al.

37. As to claim 30, Kanai teaches a method as in claim 1, further comprising: one or more of said front-end servers, maintaining its own table of attribute-based categories for transactions that it has processed; for each attribute-based category in its table, maintaining an indication of when a transaction corresponding to the attribute-based category was last processed by the front-end server (History Information Management Unit 107/History Information Memory Unit 108 Col. 19 Ln. 39 – 44, Col. 20 Ln. 25 – 32, figure 33 Col. 24 Ln. 59 – 67, Col. 25 Ln. 1 – 9).

38. Kanai is silent with reference to after a predetermined time of not processing a transaction corresponding to an attribute-based category in its table, broadcasting an indication of this event to a plurality of workload managers that can route transactions to the front-end server.

39. Shapiro teaches after a predetermined time of not processing a transaction corresponding to an attribute-based category in its table, broadcasting an indication of this event to a plurality of workload managers that can route transactions to the front-end server (“...poor goodness...” page 6 paragraphs 0070/0071).

40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shapiro and Kanai because the teaching of Shapiro would improve the system of Kanai by dynamically routing data within a network such that a node determines an efficient method of transmitting the data based on the routing information, and transmitting the data to a neighbor node based on the determination of the efficient method (page 1 paragraph 0009).

41. As to claim 31, see the rejection of claim 29 above.

42. As to claim 32, Shapiro teaches an apparatus as in claim 10, further comprising program code to update, in response to broadcast indications from said front-end servers, a table of which attribute-based categories are assigned to which front-end servers, said table being maintained by and for a particular workload manager (page 6 paragraphs 0070/0071).

43. As to claim 33, Kanai teaches a method for routing a transaction to a front-end server, comprising: maintaining a table at a workload manager, the table comprising indications of which attribute-based categories of transactions are assigned to which of a plurality of front-end servers (Processing History Information Memory Unit 108 Col. 19 Ln. 21 – 33); upon receiving said transaction at the workload manager, identifying at least one attribute-based category for the transaction (“Withdraw” figure 9/10 Col. 15 Ln. 26 – 67); identifying at least one of the plurality of front-end servers to process the

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transaction based at least in part on said identified attribute-based category of said transaction (Col. 15 Ln. 56 – 62, "...features parameters..." Col. 19 Ln. 13 – 38) and at least in part on whether said table comprises an indication that said identified attribute-based category is assigned to one of said front-end servers ("...features parameters..." Col. 19 Ln. 13 – 38, figure 33 Col. 24 Ln. 59 – 67); and routing said transaction to one of said at least one identified front-end servers (Col. 15 Ln. 56 – 62, Col. 17 Ln. 36 – 50).

44. Kanai is silent with reference to periodically updating the table in response to broadcasts received from said front-end servers.

45. Shapiro teaches periodically updating the table in response to broadcasts received from said front-end servers (page 6 paragraphs 0070/0071).

46. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Shapiro and Kanai because the teaching of Shapiro would improve the system of Kanai by dynamically routing data within a network such that a node determines an efficient method of transmitting the data based on the routing information, and transmitting the data to a neighbor node based on the determination of the efficient method (page 1 paragraph 0009).

Response to Arguments

47. Applicant's arguments filed 11/6/04 have been fully considered but they are not persuasive.

Applicant argues in substance that (1) neither tables (i.e table 4B or 4C) of the Kanai prior art reference maintains assignments between front-end servers and

attribute-based categories of the transactions, (2) the Kanai prior art reference does not teach selecting a front-end server by determining when an identified attribute-based category of a transaction is new, (3) the Kanai prior art reference does not teach notifying a workload manager of a one front-end server assigned to a new attribute-based category of transaction and (4) the Cross prior art reference does not teach transaction routing unlike the Kanai prior art reference and the Cross prior art reference's switch is not a front-end server.

Examiner respectfully traverses Applicant's arguments:

As to point (1), the invention as claimed requires the selection of a front-end server based on the attribute-based category of a transaction and based in part on the front-end server corresponding to the attribute-based category. The Kanai prior art reference discloses the selection of a front-end server by looking up the data arrangement information/history table on based on newly arrived transaction (Col. 14 Ln. 56 – 65, Col. 12 Ln. 1 – 9). Also the transaction routing unit selects optimum front-end server based on feature parameters, which are part of a transaction received from a source processor (Col. 19 Ln. 13 – 38).

As to point (2), the Kanai prior art reference teaches selecting a front-end server by determining when an identified attribute-based category of a transaction is new because a routing determination unit is provided and it determines the arrival of a new transaction (Col. 14 Ln. 56 – 67, Col. 15 Ln. 1 – 8).

48. As to point (3), the Kanai prior art reference teaches notifying a workload manager of a one front-end server assigned to a new attribute-based category of transaction (Col. 25 Ln. 27 – 32).


As to point (4), the Cross prior art reference teaches transaction routing by sending data packets from a client and it is function of the switch to remove the client (which could be any node/front-end server in the network) from the network table (Col. 6 Ln. 15 – 27).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-6:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-Ai can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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